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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/682,022 | 10/10/2003 | Kei Yasuna | 520.43197X00 | 8013 |
| 20457 | 7590 | 11/17/2004 | EXAMINER | |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889 | | | MERCEDES, DISMERY E | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2651 | | |

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|--------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/682,022 | YASUNA ET AL. |
| | Examiner Dismery E Mercedes | Art Unit 2651 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 October 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5 is/are rejected.
- 7) Claim(s) 6 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 October 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. The information disclosure statement (IDS) submitted on October 10,2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: for example: "101 & 104" of FIG.1; "104" of FIG.2. Please revise all submitted drawings and verify that all reference characters/elements in the drawings are stated in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "second sector marker 208", page 9, line 32 of the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Belser (US 6,643,082).

Belser discloses a magnetic disk apparatus, comprising: a magnetic disk for recording information thereon (col.5, lines 3-4); a head having a write element for use of recording information onto said magnetic disk and a read element for reproducing information from said magnetic disk (col.5, lines 11-12); and an actuator for moving said head to a desired radial position on said magnetic disk (col.5, line 17-20), wherein on said magnetic disk is recorded a servo pattern for positioning said head on a recording surface thereof, and said servo pattern includes marker patterns for detecting passage time of said head (col.5, line 55-57), being disposed in a front and a rear of a burst pattern for detecting the radial position of said head,

respectively, on a track extending in a circumferential direction thereof (col.5, lines 5-6 and lines 55-58).

As to Claim 3, Belser further discloses a distance between said servo patterns written on the recording surface of said magnetic disk in the circumferential direction is shorter than a length of said burst pattern (as depicted in FIG.4, "405" and "430", the length between the servo patterns "405" is shorter than the length of burst pattern "430").

As to Claim 4, is a method claim corresponding to an apparatus claim 1, and it is therefore rejected for similar reasons as set forth in the rejection of claim one, respectively.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belser (US 6,643,082) in view of Baker et al., hereinafter, Baker, (US 6,704,156 B1).

Belser discloses a magnetic disk apparatus, as described in the base claim 1, but fails to explicitly teach wherein the marker pattern of said servo pattern written on the recording surface of said magnetic disk is shifted with respect to the marker pattern of said servo pattern, which is written neighboring thereto in the circumferential direction of said magnetic disk, by a half of width thereof, on the position in a radial direction thereof.

However, Baker et al. teaches marker pattern of said servo pattern (servo bursts) written on the recording surface of said magnetic disk is shifted with respect to the marker pattern of

said servo pattern, which is written neighboring thereto in the circumferential direction of said magnetic disk, by a half of width thereof, on the position in a radial direction thereof (as depicted in FIG.12, col.17, lines 5-10, and 15-21).

Therefore, it would have been obvious to one of ordinary skill in the art to have implemented Baker's technique on the apparatus as taught by Belser, because it would the magnetic disk apparatus taught by Belser with the enhanced capability of writing servo pattern that can be self servo written based upon position and timing information (col.17, lines 13-14 of Baker et al.).

As to Claim 5, is a method claim corresponding to an apparatus claim 2, and it is therefore rejected for similar reasons as set forth in the rejection of claim two, respectively.

Allowable Subject Matter

8. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 6, is allowable over prior art of record since the cited references fails to particularly disclose or suggest the servo pattern recording method of claim 4 in combination with *a distance is measured between the servo patterns neighboring to each other by reproducing two (2) of said servo patterns neighboring to each other in the circumferential direction, which are recorded on the recording surface of said magnetic disk, and upon basis of this distance measured is adjusted a timing of writing when recording a new servo pattern, when conducting said self servo write operation.*

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chainer et al. (US 6,101,055): for disclosing a trigger pattern detection method and apparatus

Chainer et al. (US 6,735,031 B2): for disclosing a method for storage of self-servowriting timing information.

Yarmchuk et al. (US 5,907,447): for disclosing a radial self-propagation pattern generation for disk file servowriting.

Chainer et al. (US 5,757,574): for disclosing methods and systems for self-servowriting including maintaining a reference level within a usable dynamic range.

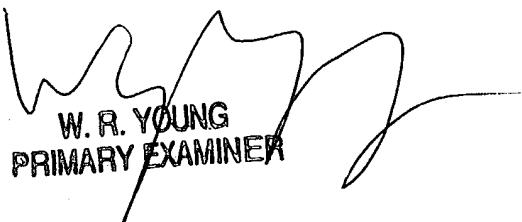
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E Mercedes whose telephone number is 703-306-4082. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dismery E Mercedes
Examiner
Art Unit 2651

DM


W. R. YOUNG
PRIMARY EXAMINER